



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re-application of

Richard Marcks VON WURTEMBERG et al.

Group Art Unit: 2881

Application No. 09/438,955

Examiner: C. Jackson

Filed: November 12, 1999

Title: BOTTOM EMITTING VCSEL (VERTICAL CAVITY SURFACE EMITTING LASER) WITH MONITOR EMISSION THROUGH TOP MIRROR

REQUEST FOR RECONSIDERATION

GAU 2881  
Commissioner for Patents  
Washington, D.C. 20231

Sir:

In response to the Office Action mailed April 24, 2001, Applicants respectfully request reconsideration of the rejection of claims 1-17 which remain pending herein.

The Examiner has cited the Lin et al. patent US 5,838,708 as being anticipatory of claims 1-7, 9-13 and 15-17. In addition, this reference has been used to allege that claims 8 and 14 are unpatentable as well under § 103. Applicants have carefully reviewed the Lin et al. reference and request that the Examiner reconsider the rejection for the following reasons.

In Lin et al., what is being fabricated is a VCSEL where a monitor diode is integrated with the VCSEL structure. In other words, the monitor is effectively grown into the same epitax run as VCSEL. This is in marked contrast to the claimed invention.

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In Applicants' invention, a pre-formed monitor diode is positioned on the laser to detect the emission of light.

The hidden metal contact mentioned in Lin et al. has a different purpose than the present invention. In Lin et al., the Schottky contact formed by depositing the metal on a semiconductor acts as the monitor diode and has to be so thin that light can be transmitted through it and used for other purposes. In the invention, the thin metal forms an ohmic contact so that current can be injected into the VCSEL thereby causing it to emit light. The light transmitted through the thin metal falls upon the separate diode thereby allowing the power of the light to be monitored.

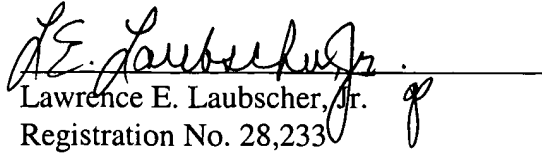
Therefore the claimed invention is directed to a VCSEL which permits light monitoring and does not inherently incorporate a light diode as in the case of the Lin et al. patent.

In view of the fact that the Applicants have claimed a different invention, which invention is not in any way obvious from the teachings of Lin et al., reconsideration of the pending claims relative to Lin et al. is requested. With respect to the dependent claims and independent claim 11 directed to the method, Applicants contend that where there is a significant difference in the apparatus, there can be no obviousness of the method for making the different structure. This is precisely the case in the instant application. The method is specifically directed to a method for monitoring the late emission from the laser where there is provided a transparent omit contact.

Accordingly, reconsideration and withdrawal of all grounds of rejection and allowance of claims 1-17 is courteously solicited.

Respectfully submitted,

June 24, 2001

  
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**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: GAU 2881, Commissioner for Patents, Washington, D.C. 20231 on July 24, 2001.

Geri Spicknall

Signature

